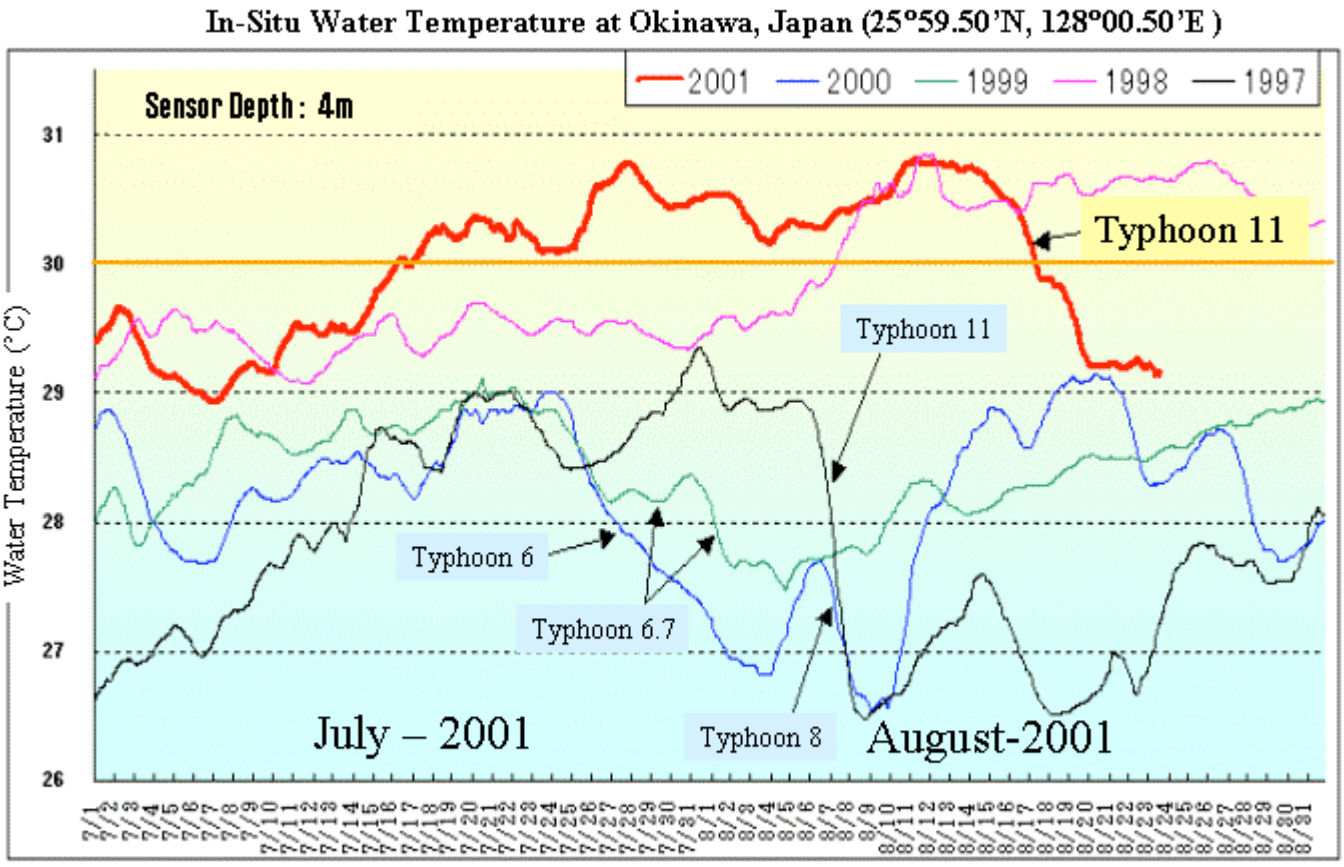
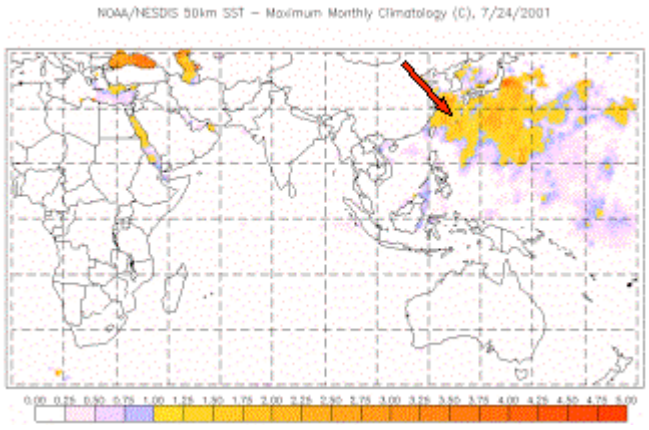
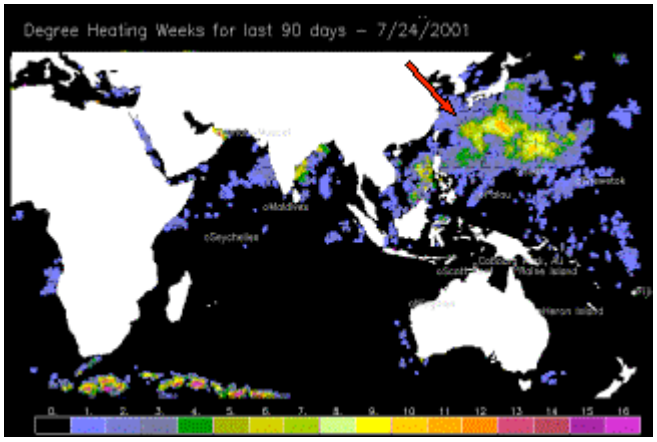
http://coralreefwatch.noaa.gov/satellite/events/significant_event_01oct2001.html



(From S. Kakuma and Rob van Woesik)





Coral Reef Bleaching in Okinawa, Japan -- Coral Reef Watch has reported that extensive coral reef bleaching occurred in the

Okinawa (Japan) region 2001 beginning in the early summer. Reports from the region told of extensive coral bleaching spreadir from the main island of Okinawa to small islands offshore. Bleaching was considerably worse along the main island of Okinawa compared with small islands offshore." "The first signs of bleaching (due to thermal stress) was on 21st July, and it has bee progressively getting more extensive; bleaching has slowly spread deeper, and has progressively affected more colonies within each coral population." On 23 July 2001 the water temperature reached 30.0 to 30.5 deg C in the region and measurements at Tomori Re Amami Oshima Island on 24 July 2001 showed that water temperature in some tidal pools were as high as 39-41 deg C. Note, that it is warmer now than the same period in 1998 (the year of the worst coral reef bleaching around the globe ever recorded in terms of magnitude and spatial coverage), even down to 60m." On the morning of 8 August 2001, the water temperatur on the west coast of Okinawa was reported to be still 30.5 deg C, from the sea surface down to 10 m. The multi-year in-situ water temperature time series figure at the top of this page shows that temperatures at a site in the region during July and August of 200 were much higher than the previous 4 years (even the previous record-bleaching 1998 event) and verifies our satellite SSTs.

NOAA's coral reef bleaching HotSpot and Degree Heating Weeks (DHW) charts (shown above) derived from satellite remotely sens sea surface temperature seems to be very informative in showing the progressive warming. The **HotSpot charts** and **DHW charts** clearly show that the extraordinarily warm water started to cover the Okinawa region beginning in mid-July and thermal stress in th

egion continued to accumulate through early September 2001.

The good news is that "the SSTs have dropped to 28 degree C (on
18 September 2001) and recovery is likely (in other words, if a
coral is still alive today, then judging by response during the 1998
event, it will probably recover)," commented by Dr. Rob van Woes
of University of the Ryukyus, Japan.